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CSR Reviewer Wins Nobel Prize Day Before His Meeting



**Nobel Prize
Chemistry
2012**

"I thought he was in the hospital," said [Dr. Raya Mandler](#) when she heard the message left on her cell phone by Dr. Brian Kobilka from Stanford University. He was due to review grant applications the next day at a meeting of the study section she manages: [Molecular and Integrative Signal Transduction](#). "Dr. Kobilka said 'something came up. It looks quite serious, and I am sorry I cannot come to the meeting.'"

When she checked her email, she saw he hadn't been struck ill. He had just won the 2012 [Nobel Prize in Chemistry](#) with his colleague Dr. Robert Lefkowitz from the Howard Hughes Medical Institute and Duke University Medical Center. Drs. Kobilka and Lefkowitz were recognized for studies of cellular receptors that control a large variety of body responses, such as metabolism, hormonal balance, proper eye vision and rejection of pathogens.

Dr. Kobilka told Dr. Mandler he got the Nobel call at 2:30 in the morning. At first he didn't believe it, but it occurred to him that the caller had a Swedish accent. By 4:30 a.m. there was no doubt—the media descended on his house. He knew he couldn't come to the study section meeting. But he asked Dr. Mandler if he could phone into it. Despite all that was going on, he stayed on the line for the entire 2-day meeting.

"I'm humbled by such dedication of an outstanding researcher," said CSR Director Dr. Richard Nakamura. "It reminds us of the dedication of thousands of the world's best scientists who help NIH identify research that will foster future breakthroughs."

A Proud Day for the NIH Peer Reviewers

"It was very exciting," said Dr. Mandler. "The reviewers felt two feet taller, it goes down in history." It was indeed a proud day for Mandler and her reviewers.

The grant that funded Dr. Kobilka's winning research was reviewed in her study section. "When it was reviewed in 2007, reviewers said it would be a breakthrough if he succeeded . . .," said Dr. Mandler. "It was very risky, but in his hands the reviewers thought it would probably work . . . so it got a very good score and funding."

Soon after, she recruited Kobilka, who is on his 4th year as a member of her study section.

Dr. Kobilka Is One of Many NIH Reviewers Honored by a Nobel Prize

"This is not a rare event as some might believe," said Dr. Nakamura. "Dr. Lefkowitz is also remembered and appreciated for his service on NIH review groups. And 30 of the Nobel Prize winners recognized in the last 13 years have served on NIH peer review groups."

When Dr. Mandler asked Dr. Kobilka to share his thoughts on peer review, he said, "People tend to complain, but the reality is that NIH peer review is a mature, highly responsive and probably the best system existing today."

Dr. Richard Nakamura Named CSR Director



NIH Director Dr. Francis Collins stole the show at the December 3, 2012, meeting of CSR's Advisory Council by making the surprise announcement: Dr. Richard Nakamura was selected to be the new CSR Director. Dr. Nakamura has been serving as the acting CSR Director since September 2011.

Dr. Collins' decision came after he interviewed three candidates identified from a nationwide search by a committee comprising high-level scientists from the NIH and scientific communities.

"Richard has done a tremendous job of leading CSR in this transitional period," said Dr. Collins. "CSR has experienced many changes in a short amount of time, and Richard has demonstrated extraordinary leadership abilities as CSR continues to evaluate its trans-NIH peer review processes by putting improved and more efficient procedures in place so the NIH can fund the most promising research."

In accepting his appointment, Dr. Nakamura emphasized the key role peer review plays in advancing science and ensuring the wise use of taxpayer funds and the importance of working collaboratively with all the stakeholders at NIH and in the scientific community.

Dr. Nakamura Then Listed Some Initial Priorities for CSR

- Become more scientific in assessing approaches to improve the efficiency and particularly the quality of NIH peer review.
- Work hard to understand and address possible disparities in NIH awards.
- Collaborate with the NIH and scientific communities to identify critical problems, such as the definition of a "new" application, and to develop solutions.
- Help the public understand the role of NIH peer review in advancing science and health in the United States.

He concluded by saying, "I want others to know that CSR is not just the place that conducts reviews but we are an organization that is fundamentally committed to the science of the U.S."

Dr. Nakamura had a 32-year career at the National Institute of Mental Health (NIMH), where he has served as both its Scientific Director and Deputy Director. He also was Acting Director of the NIMH from 2001 to 2002. During his time at NIMH, he received a number of leadership awards, including the prestigious Presidential Rank Award.

Learn More by Reading the [NIH Press Release](#).

CSR's Council Suggests Five Ways NIH Can Help Applicants



CSR's Advisory Council recently asked NIH to consider five ideas for helping applicants with promising research ideas to stay in the game despite historically low funding rates. Because these ideas deal with trans-NIH policies beyond CSR, Council members asked CSR's Director to share them with the appropriate NIH officials.

CSR Council Ideas

1. Treat all applications as new and let investigators instead of NIH decide when resubmission is futile. Council members suggested that the resulting reviews would be more independent and simplified since earlier reviews would not be considered. Reviewers might also be more focused on merit because they wouldn't get sidetracked by considering how investigators responded to previous reviews.

Our Council suggested doing a pilot where investigators who opt-in could resubmit any R01 application as many times as they wanted, but they could submit no more than two research project grant applications in any 12 month period. Reviewers would be encouraged to send strong messages about applications that need substantial revision.

2. Encourage more NIH Institutes and Centers (ICs) to allow investigators to respond to their reviews prior to Council consideration so very promising applications that might slip through the system could be identified. Principal investigators (PIs) with "gray zone" applications would be asked to provide a response to their reviews. IC Program staff would submit these comments and applications to their Councils, which provide the second level of peer review.

3. Enhance communications with PIs: Study sections and NIH program staff should do better at communicating to PIs about applications that are unlikely to be successful or, alternatively, are of potential interest. [See our last PRN newsletter: [Make the Best Use of the "Additional Comments to Applicant" Box](#)]

4. Encourage NIH ICs to take full advantage of the [R56](#) funding mechanism to provide bridge funding to promising investigators. These "High Priority, Short-Term Project Awards" provide 1 year funding for high-priority new or competing renewal R01 applications that score just outside an ICs funding limits.

5. Provide longer-term funding for some PIs: For investigators with large and successful programs, NIH should consider offering funding for a longer duration but at a

lower overall amount. The savings would be used to fund more applications. Restrictions on participating PIs would be necessary to ensure that the result would be revenue-positive.

Follow the A2 Discussion on the NIH Office of Extramural Research's Website: [The A2 Resubmission Policy Continues: A Closer Look at Recent Data](#)

NIH's New Plan to Diversify and Strengthen the Research Workforce



NIH unveiled a [series of initiatives](#) to strengthen and improve the diversity of the biomedical research workforce on December 7, 2012, after seeking input from the Advisory Committee to the NIH Director and other community representatives.

"The future of biomedical research depends upon our ability to support a research ecosystem that leverages the flood of biomedical data, strengthens the research workforce through diversity, and attracts the next generation of researchers," said NIH Director Dr. Francis Collins.

The Need to Address NIH Funding Disparities

Despite long-standing efforts by NIH and others to increase the number of scientists from underrepresented groups, the diversity of the biomedical workforce still fails to mirror the diversity of the U.S. population. In addition, a [2011 article by Ginther et al.](#) reported a discrepancy in R01 grant success rates between White and Black applicants—even after controlling for various variables.

Initiatives to Promote Fairness in Peer Review

Because so many variables have been considered without finding a cause for the disparities, NIH is compelled to take action while it continues to study the situation. NIH has decided to:

- ***Provide reviewers and SROs implicit bias and diversity awareness training.***
- ***Try to understand what affect the complete anonymization of applications would have on grant review outcome and award disparities.***

NIH Initiatives to Advance Diversity in the Research Workforce

- ***Provide career support through*** a new program to provide rigorously mentored research experiences for undergraduates at participating institutions and to provide financial support for these undergraduates to pursue biomedical research careers. This program will also provide faculty support for training highly effective mentors and innovation space to develop new approaches for increasing diversity in the Ph.D. training pathway.
- ***Increase mentoring:*** by establishing a National Research Mentoring Network to connect students, postdoctoral fellows, and faculty with experienced mentors; developing standards of good mentorship in biomedical research; and providing grantsmanship workshops and training opportunities.

- **Require a training or development plan for all new trainees.**
- **Increase engagement of NIH leadership** by recruiting a [Chief Officer for Scientific Workforce Diversity](#) and establishing an NIH diversity steering committee.

Other Initiatives to Advance and Strengthen Biomedical Research

NIH also announced an extensive list of initiatives to support the development of the biomedical research workforce and facilitate the sharing and processing of research data. Learn more by reading the related [NIH press release](#).

NIH Responds to Nature Commentary Critical of NIH Peer Review



The ability of NIH review panels to identify innovative research was questioned in a recent Nature commentary: "[Research grants: Conform and be funded](#)," by Dr. Joshua Nicholson at Virginia Tech and John Ioannidis at Stanford University.

The authors reported on a study they did using bibliometric and NIH funding data. In summarizing their work, they said, ". . . we evaluated scientists who have published papers since 2001 — as first, last or single authors — that have so far received 1,000 citations or more. We found that three out of five authors of these influential papers do not currently have NIH funding as principal investigators." In addition, the authors said that only a small number of the highly cited researchers served on NIH study sections.

NIH Questions the Authors' Approach and Conclusion

The NIH [response](#) came from Dr. George Santangelo, Director of the NIH Office of Portfolio Analysis, and Dr. David Lipman, Director of the National Center for Biotechnology Information at the National Library of Medicine:

"We disagree with Joshua Nicholson and John Ioannidis' claim that the peer-review system of the US National Institutes of Health (NIH) works against genuinely innovative research, because we believe that their analysis is flawed.

They use 1,000 or more citations as a proxy for identifying breakthrough discoveries. However, more than 60% of the 158 highly cited articles they analyze cannot be categorized as innovative primary research: 34% are reviews, reports, clinical guidelines or descriptions of resources; 18% are clinical trials of the type primarily funded by industry; and 11% fall outside the NIH mandate that research should have the potential to improve human health (see our [analysis](#)).

Excluding these articles leaves 58 of the original 158: of these, 83% were funded by the NIH and 17% were funded by private industry."

CSR Director Dr. Richard Nakamura later questioned the study on different grounds. "Counting citations is not the best way to assess the award merit of an investigator's new ideas," he said. "The best hope for research breakthroughs is to value and focus on the judgment of successful and broad-minded reviewers."

Drs. Santangelo and Lipman noted that NIH welcomes innovative research through a number of funding mechanisms, such as the NIH Director's Pioneer, Transformative Research, Early Independence and New Innovator awards.

View additional comments on the [Nature website](#).

Reviewing Applications Affected by Super Storm Sandy



NIH wants reviewers to be mindful of applications from institutions temporally damaged by Hurricane Sandy.

What You Need to Know: When evaluating the environment at these affected institutions, you are asked to focus on the scientific and technical merit of the work proposed, and assume that NIH staff will work with the applicant institution to restore the facilities, equipment, personnel and other resources required to perform the work, if an award is made.

This approach should allow the majority of previously submitted applications to continue through the peer review process without requiring any post-submission application materials.

You May See Post-Submission Materials: In cases where permanent damage has rendered the application no longer viable, applicants were permitted to submit [post-submission grant application materials](#) to revise information that must be made as a result of the storm. These applicants were told that changes to the Specific Aims or Research Strategy sections are not considered acceptable post-submission materials, except in [certain cases](#).

Some Applications May Be Withdrawn: Applicants from institutions affected by the storm were encouraged to withdraw pending submissions and resubmit their applications at the next available due date if changes to the Specific Aims or Research Strategy pages are needed.

Go to the NIH Guide to Learn more: [Notice of Assistance Available to Institutions Impacted by Super Storm Sandy Guide Notice](#)

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